

Amendment to the claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (currently amended) A sterile transfer device for fluids comprised of a body having a bore formed through at least a portion of its interior, a movable plunger contained within the bore, wherein the body and the plunger are formed of plastic, the body having a first and a second end, the first end containing a face designed to be attached to an upstream component, the plunger having a corresponding first and second end, the plunger having a shape corresponding to that of the bore and being of a diameter less than that of the bore, a port formed on the component selected from the group consisting of the second end of the plunger and a portion of the body downstream of the first end of the body, the port being connected to a downstream component, one or more seals between the plunger and the bore to form a liquid tight seal between various portions of the plunger and the bore, the first end of the plunger when in a closed position being in alignment with the face of the body, which combined, form a steamable surface and a sterile barrier against the environment to the rest of the interior of the body, the plunger and downstream components and a cam slot formed in the body, a cam formed on an outer surface of the plunger and contained within the cam slot and a handle formed on the plunger to move the plunger within the bore from a closed to an open and then back to a closed position, wherein the cam remains within the cam slot as the plunger moves from a closed position to an open and back to a closed

position.

Claim 2 (original) The device of claim 1 wherein the bore is a central bore formed through the entire length of the body.

Claim 3 (cancelled)

Claim 4 (currently amended) The device of claim 1 wherein the device is formed of a plastic selected from the group consisting of polyetherimides(PEI), polyetheretherketone(PEEK), polyetherketone(PEK), polysulphones, polyarylsulphones, polyalkoxysulphones, polyethersulphones, polyphenyleneoxide, polyphenylenesulphide and blends thereof.

Claim 5 (original) The device of claim 1 wherein the device is formed of polyetherimides(PEI).

Claims 6-10 (cancelled)

Claim 11 (currently amended) A sterile transfer device for fluids comprised of a body having a bore formed through at least a portion of its interior, a movable plunger contained within the bore, the body having a first and a second end, the first end containing a face designed to be attached to an upstream component, the plunger having a corresponding first and second end, the plunger having a shape corresponding to that of the bore and being of a diameter less than that of the bore, a port formed on the component selected from the group consisting of the second end of the plunger and a portion of the body downstream of the first end of the body, the port being connected to a downstream

component, the first end of the plunger when in a closed position being in alignment with the face of the body, which combined, form a steamable surface and a sterile barrier against the environment to the rest of the interior of the body, the plunger and downstream components and a cam slot formed in the body, a cam formed on an outer surface of the plunger and contained within the cam slot and a handle formed on the plunger to move the plunger within the bore from a closed to an open and then back to a closed position, wherein at least the first face of the body and the plunger are formed of a material selected from the group consisting of polyetherimides (PEI), polyetheretherketone (PEEK), polyetherketone (PEK), polysulphones, polyarylsulphones, polyalkoxysulphones, polyethersulphones, polyphenyleneoxide, polyphenylenesulphide and blends thereof.

Claims 12-13 (cancelled)

Claim 14 (previously presented) The device of claim 1 wherein the first face of the body is in the form of a sanitary flange.

Claim 15 (previously presented) The device of claim 11 wherein the first face of the body is in the form of a sanitary flange.

Claim 16 (currently amended) A sterile transfer device for fluids comprised of a body having a bore formed through at least a portion of its interior, the bore having [[a]] three sections each with a different diameter, the body having a first and a second end, the first end containing a face designed to be attached to an upstream component, a movable

plunger contained within the bore, the plunger having a shape corresponding to that of the bore and being of a diameter less than that of the bore, the plunger having a corresponding first and second end, the second end of the plunger being connected to a downstream component, the first end of the plunger when in a closed position being in alignment with the face of the body, which combined, form a steamable surface and a sterile barrier against the environment to the rest of the interior of the body, one or more seals between the plunger and the bore to form a liquid tight seal between various portions of the plunger and the bore, and a cam slot formed in the body, a cam formed on an outer surface of the plunger and contained within the cam slot and a handle formed on the plunger to move the plunger within the bore of the body, wherein the cam remains within the cam slot as the plunger moves from a closed position to an open and back to a closed position.

Claim 17 (previously presented) The device of claim 16 wherein the bore has a first bore section of a first set diameter, a second bore section of a second set diameter greater than the first set diameter and a transition section between the first and second sections having a tapering diameter along its length from the first section to the second section which is a progression of the difference in diameters between the first set diameter and the second set diameter.

Claim 18 (previously presented) The device of claim 16 wherein the bore has a first bore section of a first set diameter, a second bore section of a second set diameter greater than the first set diameter and a transition section

between the first and second sections having a tapering diameter along its length from the first section to the second section which is a progression of the difference in diameters between the first set diameter and the second set diameter and the progression is linear.

Claim 19 (previously presented) The device of claim 16 wherein the plunger has one or more openings adjacent the first end and a fluid channel connecting the one or more openings to the second end of the plunger.

Claim 20 (previously presented) The device of claim 1 wherein the one or more seals are arranged along the outer surface of the plunger to form a liquid tight seal between various portions of the plunger and the bore.

Claim 21 (currently amended) A sterile transfer device for fluids comprised of a body having a bore formed through at least a portion of its interior, a movable plunger contained within the bore, wherein the body and the plunger are formed of plastic, the body having a first and a second end, the first end containing a face designed to be attached to an upstream component wherein the first face of the body is in the form of a sanitary flange, the plunger having a corresponding first and second end, the plunger having a shape corresponding to that of the bore and being of a diameter less than that of the bore, a port formed on the component selected from the group consisting of the second end of the plunger and a portion of the body downstream of the first end of the body, the port being connected to a downstream component, the first end of the plunger when in a closed position being in alignment with the face of the

body, which combined, form a steamable surface and a sterile barrier against the environment to the rest of the interior of the body, the plunger and downstream components, one or more seals between the plunger and the bore to form a liquid tight seal between various portions of the plunger and the bore, and a cam slot formed in the body, a cam formed on an outer surface of the plunger and contained within the cam slot and a handle formed on the plunger to move the plunger within the bore from a closed to an open and ~~then~~ back to a closed position.

Claim 22 (currently presented) A sterile transfer device for fluids comprised of a body having a bore formed through at least a portion of its interior, a movable plunger contained within the bore, wherein the body and the plunger are formed of plastic, the body having a first and a second end, the first end containing a face designed to be attached to an upstream component wherein the first face of the body is in the form of a sanitary flange, the plunger having a corresponding first and second end, one or more seals between the plunger and the bore to form a liquid tight seal between various portions of the plunger and the bore, a port formed on the component selected from the group consisting of the second end of the plunger and a portion of the body downstream of the first end of the body, the port being connected to a tube which in turn is connected to a collection bag, the first end of the plunger when in a closed position being in alignment with the face of the body, which combined, form a steamable surface and a sterile barrier against the environment to the rest of the interior of the body, the plunger and downstream components and a cam slot formed in the body, a cam formed on an outer surface of

the plunger and contained within the cam slot and a handle formed on the plunger to move the plunger within the bore from a closed to an open and ~~then~~ back to a closed position.

Claim 23 (previously presented) The device of claim 22 wherein the port has a barb for attaching the tube to the port.

Claim 24 (previously presented) The device of claim 22 wherein the plunger has a shape corresponding to that of the bore and being of a diameter less than that of the bore.

Claim 25 (currently amended) A device comprising a valve having a face and a body, wherein the face is adapted to attach to an upstream component and includes at least one opening, the body having a bore extending at least part way through the body, a plunger contained at least partially in the bore and fitting within the opening of the face, the plunger having a first portion and a second portion, a port formed on the component selected from the group consisting of the second end of the plunger and a portion of the body downstream of the first end of the body, one or more seals disposed on the plunger between the first portion and the second portion wherein the one or more seals are adapted to sealingly mate with the bore of the body to seal from the environment the bore, wherein the plunger is movable between an open and a closed position, the one or more seals of the plunger engage with and seals the opening of the face when the plunger is within the opening in a closed position and a cam formed on the plunger and a cam slot formed in the body to limit the length of travel of the plunger in the bore when the plunger is moved to its open position by the

handle, wherein the cam remains within the cam slot as the plunger moves from a closed position to an open and back to a closed position.

Claim 26 (previously presented) A device for fluid sampling comprising a valve having a face and a body, wherein the face is adapted to attach to an upstream component and includes at least one opening, the body having a bore extending at least part way through the body, a plunger contained at least partially in the bore and fitting within the opening of the face, the plunger having a first portion and a second portion, a port formed on the component selected from the group consisting of the second end of the plunger and a portion of the body downstream of the first end of the body, the port being connected to a tube which in turn is connected to a collection bag, one or more seals disposed on the plunger between the first portion and the second portion wherein the one or more seals are adapted to sealingly mate with the bore of the body to seal from the environment the bore, wherein the plunger is movable between an open and a closed position by a handle that moves the plunger linearly within the bore, the one or more seals of the plunger engage with and seals the opening of the face when the plunger is within the opening in a closed position and a cam formed on the plunger and a cam slot formed in the body to limit the length of travel of the plunger in the bore when the plunger is moved to its open position by the handle.

Claim 27 (previously presented) A sterile transfer device for fluids, comprising:

a body having a bore formed through at least

one portion of its interior, the body having a first end and a second end, the first end having a face designed to be connectable to an upstream component;

a movable plunger contained within the bore, the plunger having a first end and a second end corresponding to the first end and the second end of the body, the plunger having a shape corresponding to that of the bore and being of a diameter less than that of the bore, the first end of the plunger when in a closed position being in alignment with the face of the body and forming a steamable surface and a sterile barrier against the environment to the rest of the interior of the body;

a port connectable to a downstream component;
and

one or more seals between the plunger and the bore to form a liquid tight seal between various portions of the plunger and the bore.

Claim 28 (previously presented) The device of claim 27, further comprising a handle formed on the plunger to move the plunger within the bore from a closed to an open and then back to a closed position.

Claim 29 (currently amended) the device of claim 27, further comprising a cam slot formed in the body, a cam formed on an outer surface of the plunger and contained within the cam slot, wherein the cam remains within the cam slot as the plunger moves from a closed position to an open and back to a closed position.

Claim 30 (currently amended) The device of claim 27, further comprising a cam slot formed in the body, a cam formed on an outer surface of the plunger and contained within the cam slot and a handle formed on the plunger to move the plunger within the bore from a closed to an open and then back to a closed position, wherein the cam remains within the cam slot as the plunger moves from a closed position to an open and back to a closed position.

Claim 31 (previously presented) The device of claim 27, wherein the one or more seals form a liquid tight seal between various portions of the plunger and the bore when they are in the open position.